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Characteristics of Certificate Completers With Their Time to Certificate and Labor Market Outcomes

The number of certificates conferred by U.S. postsecondary institutions increased 64 percent in the last decade, from 572,000 in 2000-01 to 936,000 in 2009-10, surpassing the 850,000 associate's degrees conferred in 2009-10 (calculated from Knapp, Kelly, Whitmore, Wu, and Gallego 2003; Knapp, Kelly-Reid, and Ginder 2011). Certificates are overwhelmingly conferred in vocational fields (whereas many associate's degrees are conferred in academic fields) and are intended to prepare students for the growing number of jobs requiring education at the subbaccalaureate level (Horn and Li 2009). National statistics on certificate requirements are reported in three broad categories of completion time (less than 1 year, 1 year to less than 2 years, and 2 years or more) but do not indicate credit requirements in detail or actual time to completion (Horn and Li 2009). Therefore, few statistics exist on how long it

actually takes students to earn a certificate, in contrast to more extensive estimates of completion time for associate's degrees (Green and Radwin 2012) and bachelor's degrees (Adelman 2006; Aud et al. 2011; Cataldi et al. 2011; Wei and Horn 2009). Because time spent earning a certificate may equate to reduced time in the labor market, accurately measuring time to certificate is critical in understanding certificate students' true investment when earning this form of human capital.

These Web Tables provide estimates of certificate credit requirements (described in more detail below), completion times, and labor market outcomes for undergraduate students who entered postsecondary education for the first time in 2003–04 and whose postsecondary transcripts indicated the first credential earned by spring 2009 was a subbaccalaureate certificate

(certificate completers). The results are based on data from about 1,700 certificate completers representing a population of approximately 311,000 students in the 2003–04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09), a nationally representative sample of undergraduates first interviewed during the 2003–04 academic year and followed over a period of 6 academic years.

In this presentation, certificate credit requirements are described in terms of semester credit hours (credits) reported on the transcript. Each credit represents approximately 1 hour of instruction and at least 2 hours of out-of-class student work per week for 15 weeks and is equivalent to 37.5 clock hours of instruction (34 C.F.R. §§ 600.2, 668.8(I)). Whereas associate's degrees typically require a minimum of 60 credits (equivalent to 2 years of full-time enrollment), and

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bachelor's degrees typically require at least 120 credits (equivalent to 4 years of full-time enrollment), certificate requirements range from less than one credit to more than 100 credits (McCormick 1999; Moore, Jez, Chisolm, and Shulock 2012).

Table 1 presents empirically derived credit hour requirements for certificate completers. Given the wide range in the number of required credits, table 1 displays the number required at the 10th percentile, the 25th percentile, the 50th percentile (median), the 75th percentile, and the 90th percentile among certificate completers. The credit requirements are presented for certificate completers overall and by selected field of study, the sector of institution where the student earned the certificate, and various enrollment, demographic, and employment characteristics.

Table 2 describes certificate completers overall and separately for each of three categories of credit requirements. For each category, the table shows the percentage distribution by sector of the institution awarding the certificate and selected student characteristics. These distributions are also reported for the 23 percent of certificate completers whose certificate requirements were missing.

Tables 3–5 report the time certificate completers took to complete their certificates in terms of the average number of months elapsed (table 3)

and the median number of months elapsed (table 4) from first enrollment to certificate completion. The estimates in both of these tables are broken out by enrollment, demographic, and employment characteristics. The estimates in table 5 present the time to certification completion by credits required for certificate completion.

Tables 6 and 7 focus on employment outcomes for certificate completers and noncompleters (that is, students who initially enrolled in a certificate program in 2003-04 but had not completed any degree or certificate and were not enrolled as of spring 2009). Table 6 shows median and average salaries, labor force participation and unemployment rates, past unemployment, and satisfaction with various aspects of employment by categories of credit requirements. Table 7 reports additional employment characteristics, including full-time employment status, occupation, and availability of employerprovided benefits, by credits required for certificate completion.

RELATED NCES REPORTS

Web Tables—Characteristics of Associate's

Degree Attainers and Time to Associate's

Degree (NCES 2012-271).

http://nces.ed.gov/pubsearch/

pubsinfo.asp?pubid=2012271

Changes in Postsecondary Awards Below the Bachelor's Degree: 1997 to 2007 (NCES 2010-167).

http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010167

Web Tables—Beginning Subbaccalaureate
Students' Labor Market Experiences: Six
Years Later in 2009 (NCES 2012-273).
http://nces.ed.gov/pubsearch/
pubsinfo.asp?pubid=2012273

Web Tables—Community College Student
Outcomes: 1994–2009 (NCES 2012-253).
http://nces.ed.gov/pubsearch/
pubsinfo.asp?pubid=2012253

Web Tables—Students Attending For-Profit
Postsecondary Institutions: Demographics,
Enrollment Characteristics, and 6-Year
Outcomes (NCES 2012-173).
http://nces.ed.gov/pubsearch/
pubsinfo.asp?pubid=2012173

Web Tables—Six-Year Attainment,
Persistence, Transfer, Retention, and
Withdrawal Rates of Students Who
Began Postsecondary Education in
2003–04 (NCES 2011-152).
http://nces.ed.gov/pubsearch/
pubsinfo.asp?pubid=2011152

DATA

First-time postsecondary students in the 2003–04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09) were identified in the 2003–04 National Postsecondary Student Aid Study (NPSAS:04).

NPSAS:04 is a nationally representative sample of about 90,000 undergraduate, graduate, and first-professional students in about 1,600 postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico that are eligible to participate in federal Title IV student aid programs. The first-time

postsecondary students in the BPS:04/09 study were interviewed three times: in 2004, at the end of their first year in postsecondary education; 3 years later, in 2006; and 6 years after they had started, in 2009. The 2009 interview focused on degree completion among those still enrolled after 2006. Approximately 19,000 respondents were identified in the NPSAS:04 survey as first-time postsecondary students and became the sample for the BPS:04/09 longitudinal study. The BPS:04/09 study sample represents the approximately 4 million undergraduates who were first-time postsecondary beginners in 2003-04. In addition, the 2009 Postsecondary Education Transcript Study component of the BPS:04/09 study collected transcript data from all institutions that BPS students attended during the 6-year period since 2003-04, including data on coursetaking, enrollment, and credentials completed.

For more information about the methodology of NPSAS:04, BPS:04/06, and BPS:04/09, see the following reports:

2004/09 Beginning Postsecondary Students
Longitudinal Study (BPS:04/09) Full-scale
Methodology Report (NCES 2012-246).
http://nces.ed.gov/pubsearch/
pubsinfo.asp?pubid=2012246

2004 National Postsecondary Student Aid Study (NPSAS:04) Full-scale Methodology Report (NCES 2006-180). http://nces.ed.gov/pubsearch/ pubsinfo.asp?pubid=2006180

VARIABLES USED

All estimates presented in these Web Tables were produced using PowerStats, a web-based software application that allows users to generate tables for many of the postsecondary surveys conducted by NCES. The variables used in these Web Tables are listed below. Visit the NCES DataLab website http://nces.ed.gov/datalab to view detailed information on how these variables were constructed and their sources. Under *Codebooks*, choose BPS: 2009 in the *view by subject* menu or *view by variable name* menu. The program files that generated the statistics presented in these Web Tables can be found at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013157.

Label	Name
Annual salary at current job	INCRES091
BPS:04/06/09 transcript weight	WTC000
Considered current job as start of career or part of an established career, 2009	JOBCAR09 ¹
Degree or certificate program, 2003–04	UGDEG ¹
Dependency status, 2003–04	DEPEND ¹
Employer offered medical, retirement, and life insurance benefits	JBEN09 ¹
Employer required industry certification or occupational license	JOBRLC09 ¹
Employer type	JOBEMP09 ¹
Employment status, includes looking for employment	JOBSTB09 ¹
High school degree type	HSDEG ¹
Highest education of parents, 2003–04	PAREDUC ¹
Hours worked per week while enrolled, 2003–04	JOBHOUR2 ¹
Hours worked per week	JOBHRS09 ¹
Job 2004: Work intensity (include work–study)	JOBENR2 ¹
Number of times unemployed	UNEMPS09 ¹
Occupation	JOBOCC09 ¹
Race/ethnicity	RACE ¹
Recent high school graduates enrolled full time in fall 2003	FALLHSFT ¹
Satisfied with all four job-related measures ²	JOBS09X4 ¹
Satisfied with fringe benefits	JOBS09A ¹
Satisfied with importance and challenge	JOBS09B ¹
Satisfied with job overall	JOBS09G ¹
Satisfied with job security	JOBS09C ¹
Satisfied with opportunities for future training	JOBS09D1
Satisfied with opportunities for promotion	JOBS09E ¹
Satisfied with opportunities to use education	JOBS09F ¹
Satisfied with pay	JOBS09H ¹
Sex	GENDER ¹
Transcript: Any degree attained	QFANYDEG
Transcript: Count of stopouts longer than 4 months	QDGT4STP
Transcript: Elapsed time from entry to certificate	QDFA2CRT
Continued on next page.	

ABOUT POWERSTATS

PowerStats produces the designadjusted standard errors necessary for testing the statistical significance of differences in the estimates. It also contains a detailed description of how each variable was created and includes question wording for items coming directly from an interview.

With PowerStats, users can replicate or expand upon the tables presented in this report. The output from
PowerStats includes the table estimates (e.g., percentages or means), standard errors, and weighted sample sizes for the estimates. If the number of valid cases is too small to produce a reliable estimate (fewer than 30 cases), PowerStats prints the double dagger symbol (‡) instead of the estimate.

In addition to producing tables,
PowerStats users may conduct linear or
logistic regressions. Many options are
available for output with the regression
results. For a description of all the options available, users should access the
PowerStats website at
http://nces.ed.gov/datalab/index.aspx.
For more information, contact
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VARIABLES USED—continued

Label	Name
Transcript: Enrolled in 2009	QDEN2009
Transcript: First certificate field of study	QFCGFCT
Transcript: Number of courses with withdrawals	QECRSWDR
Transcript: Number of repeated courses	QETCSRPT
Transcript: Remedial courses: Number taken	QETOTR
Transcript: Requirements for first certificate attained	QCRTREQ
Transcript: Sector of institution where attained first degree	QFSEC9FA
Undergraduate education helped advance career	JOBUG09 ¹

¹ Based on student interviews, which are missing for 16 percent of certificate completers.

For readers with disabilities, a Section 508-compliant version of these Web Tables is available at http://nces.ed.gov/pubsearch/ pubsinfo.asp?pubid=2013157.

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ENDNOTES

¹ The BPS samples are not simple random samples; therefore, simple random sample techniques for estimating sampling error cannot be applied to these data. PowerStats takes into account the complexity of the sampling procedures and calculates standard errors appropriate for such samples. The method for computing sampling errors used by PowerStats approximates the estimator by replication of the sampled population, using a bootstrap technique.

Table 1.

CERTIFICATE REQUIREMENTS: Credit requirements for first certificate completed at the 10th percentile, 25th percentile, 50th percentile (median), 75th percentile, and 90th percentile, by enrollment, demographic, and employment characteristics: 2009

	Credits required for certificate ¹						
Enrollment, demographic, and employment characteristics	10th percentile ²	25th percentile	50th percentile (median)	75th percentile	90th percentile		
Total	7.3 !	18.7	31.5	44.7	60.5		
					30.0		
Sector of institution awarding certificate							
Public 2-year	4.0 !!	12.0	27.5	43.0	59.3		
For-profit 2-year	12.8 !!	21.3	35.0	47.0	64.0		
For-profit less-than-2-year	16.0	26.7	38.5	47.0	61.0		
Other ³	15.0 !	20.0	33.3	42.7	63.0		
Field of study of first certificate completed							
Health and related clinical sciences	3.0 !!	19.2	31.3	44.0	54.0		
Personal and culinary services	16.0 !	26.7	40.0	46.0	48.0		
Mechanic/repair technologies/technicians	10.7 !	23.0!	48.0	62.0	65.5		
Business/management/marketing/related	10.0	16.0	24.0	37.0	56.0		
Other ⁴	8.8	15.0	27.0	41.0	60.0		
Sex ⁵							
Male	7.0 !	15.8	30.0	50.0	63.5		
Female	5.5 !!	19.0	32.0	44.0	55.0		
Race/ethnicity ^{5,6}							
White	5.0 !!	18.0	31.3	44.5	60.0		
Black	10.0 !	18.7	30.4	43.3	56.0		
Hispanic	6.7 !!	18.7	31.0	47.0	58.0		
Asian	‡	±	‡	‡	‡		
Other	6.4 !!	16.0!	31.3	42.2	63.0		
Highest level of education attained							
by either parent ^{5,7}							
High school or less	7.0 !	18.0	31.1	44.0	54.0		
Some postsecondary	11.3	19.2	33.0	47.0	62.0		
Bachelor's degree or higher	3.5 !!	18.0	31.3	46.0	64.0		
Dependency status in 2003–04 ⁵							
Dependent	5.5 !!	18.0	33.0	47.0	63.3		
Independent	7.0 !	18.7	31.0	43.3	57.0		
High school completion type ⁵							
Diploma	5.5 !!	18.0	31.5	45.0	61.3		
GED or equivalent	8.8 !!	18.0	29.3	42.7	56.7		
Other or none ⁸	9.0 !!	19.6	31.0	47.0	54.0		

Table 1.

CERTIFICATE REQUIREMENTS: Credit requirements for first certificate completed at the 10th percentile, 25th percentile, 50th percentile (median), 75th percentile, and 90th percentile, by enrollment, demographic, and employment characteristics: 2009—Continued

		Credits required for certificate ¹						
Enrollment, demographic, and employment characteristics	10th percentile ²	25th percentile	50th percentile (median)	75th percentile	90th percentile			
Recent high school graduate at postsecondary entry ⁵								
Yes	4.0 !!	17.0	32.0	46.1	63.5			
No	7.7 !	18.7	31.1	44.7	58.0			
Employment status in 2003–04 ⁵								
Not employed	10.0 !	19.6	32.0	44.5	60.0			
Employed part time	4.0 !!	18.0	32.0	44.7	60.5			
Employed full time	6.4 !	15.0	28.8	46.1	58.0			

[!] Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.

^{!!} Interpret data with caution. Estimate is unstable because the standard error represents more than 50 percent of the estimate.

[‡] Reporting standards not met (estimate based on fewer than 30 valid cases).

¹ Does not include 23 percent of certificate completers with missing values for credit requirements.

² Due to the low values of the estimates, some standard errors exceed 50 percent of estimates. These estimates are reported if standard errors are less than 50 percent of the respective estimates for all other percentiles in the category. The value for the total does not fall within the range of values for some interview-based characteristics because the total includes some certificate completers with missing interview data and the characteristics are limited to certificate completers with valid interview data.

³ Other includes private nonprofit less-than-2-year, 2-year, and 4-year institutions, public less-than-2-year and 4-year institutions, and for-profit 4-year institutions. Institutions are included in the total, but not shown separately due to small sample sizes.

⁴ Includes agriculture, operations, and related sciences; communication, journalism, and related fields; communication technology and support; computer and information science and support; personal and culinary services; education; engineering; engineering technologies and technicians; family and consumer sciences and human sciences; legal professions and studies; English language and literature/letters; multidisciplinary and interdisciplinary studies; security and protective services; public administration and social service; construction trades; mechanic and repair technologies and technicians; precision production; transportation and materials moving; visual and performing arts; health and related clinical sciences; and business, management, marketing, and related fields.

⁵ Excludes 16 percent of certificate completers who had transcript data but did not have student interview data.

⁶ Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Pacific Islander, Native Hawaiian, and students having origins in two or more races or a race not listed. Race categories exclude Hispanic origin.

⁷ Excludes the 1.2 percent of graduates who did not know either parent's highest level of education.

⁸ Includes those who had a high school completion certificate, attended a foreign high school, or had no high school diploma or completion certificate. NOTE: Results include students whose postsecondary transcripts indicated the first credential earned by spring 2009 was a certificate. Sixteen percent of certificate completers had transcript data but did not complete an interview. Credit requirements are measured in terms of semester credit hours or their equivalent. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, District of Columbia, and Puerto Rico.

Table S1.
Standard errors for table 1: CERTIFICATE REQUIREMENTS: Credit requirements for first certificate completed at the 10th percentile, 25th percentile, 50th percentile (median), 75th percentile, and 90th percentile, by enrollment, demographic, and employment characteristics: 2009

	Credits required for certificate						
Enrollment, demographic, and employment characteristics	10th percentile	25th percentile	50th percentile (median)	75th percentile	90th percentile		
Total	2.71	1.23	0.87	1.78	2.20		
Sector of institution awarding certificate							
Public 2-year	2.48	1.69	2.49	2.93	2.37		
For-profit 2-year	8.46	4.55	3.32	7.18	9.41		
For-profit less-than-2-year	3.79	1.74	5.03	1.96	2.99		
Other	4.69	4.46	3.83	5.74	9.25		
Field of study of first certificate completed							
Health and related clinical sciences	2.20	2.29	0.82	2.59	3.51		
Personal and culinary services	6.15	4.38	3.54	3.38	5.42		
Mechanic/repair technologies/technicians	3.94	9.71	8.93	2.05	2.38		
Business/management/marketing/related	2.62	3.31	5.05	6.39	5.98		
Other	2.52	2.25	2.96	4.96	3.88		
Sex							
Male	2.77	2.66	3.00	5.53	2.06		
Female	3.20	1.37	0.97	2.13	3.19		
Race/ethnicity							
White	3.14	2.50	1.18	2.13	3.24		
Black	3.35	3.06	3.44	3.77	3.90		
Hispanic	5.58	3.02	3.21	1.99	4.49		
Asian	†	†	†	†	†		
Other	6.19	7.38	4.88	9.23	6.98		
Highest level of education attained by either parent							
High school or less	2.85	1.87	1.00	2.13	2.99		
Some postsecondary	3.33	2.25	1.73	5.07	2.88		
Bachelor's degree or higher	4.37	4.83	2.67	3.50	4.17		
Dependency status in 2003–04							
Dependent	3.23	1.58	1.69	2.16	2.31		
Independent	2.83	2.19	1.18	2.00	3.09		
High school completion type							
Diploma	3.08	1.93	1.07	1.92	2.57		
GED or equivalent	4.76	2.59	2.88	3.11	4.71		
Other or none	5.77	3.91	7.90	5.12	5.19		

Table S1.
Standard errors for table 1: CERTIFICATE REQUIREMENTS: Credit requirements for first certificate completed at the 10th percentile, 25th percentile, 50th percentile (median), 75th percentile, and 90th percentile, by enrollment, demographic, and employment characteristics: 2009—Continued

	Credits required for certificate						
Enrollment, demographic, and employment characteristics	10th percentile	25th percentile	50th percentile (median)	75th percentile	90th percentile		
Recent high school graduate at postsecondary entry							
Yes	3.65	1.89	1.61	2.64	1.79		
No	2.63	1.77	1.05	1.98	2.77		
Employment status in 2003–04							
Not employed	3.29	3.47	2.15	2.54	4.21		
Employed part time	3.10	1.61	1.36	2.87	2.70		
Employed full time	2.62	2.96	2.69	2.17	3.27		

[†] Not applicable.

Table 2.

CERTIFICATE COMPLETERS: Percentage distribution of credit requirements of 2003–04 beginning postsecondary students whose first credential completed by spring 2009 was a certificate by enrollment, demographic, and employment characteristics: 2009

		Credits required for certificate ¹				
Enrollment, demographic, and employment characteristics	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Total	100.0	100.0	100.0	100.0	100.0	
Sector of institution awarding certificate						
Public 2-year	35.2	71.2	32.7	40.0	4.5!	
For-profit 2-year	21.6	11.7!	24.6	21.0	25.6	
For-profit less-than-2-year	30.9	9.9	28.0	29.2	54.9	
Other ²	12.3	7.2	14.6	9.9!	15.1	
Field of study of first certificate completed						
Health professions and related sciences	47.8	42.8	51.4	43.6	50.1	
Personal and culinary services	13.5	5.4!	16.6	12.9!	15.5	
Mechanic/repair technologies/technicians	9.6	8.3!	3.9!	18.2	12.4	
Business/management/marketing/related	7.7	11.7	7.1	5.7!	7.2	
Other ³	21.4	31.8	21.1	19.6	14.8	
Continuously enrolled ⁴						
Yes	70.1	59.5	69.2	71.7	79.0	
No	29.9	40.5	30.8	28.3	21.0	
Ever withdrew from a course ⁵						
Yes	26.4	36.3	25.7	21.8	23.3	
No	73.6	63.7	74.3	78.2	76.7	
Ever repeated a course ⁵						
Yes	9.8	11.6	10.4	12.3	5.3!	
No	90.2	88.4	89.6	87.7	94.7	
Took any remedial course ⁵						
Yes	37.4	43.3	37.4	36.5	33.4	
No	62.6	56.7	62.6	63.5	66.6	

Table 2.

CERTIFICATE COMPLETERS: Percentage distribution of credit requirements of 2003–04 beginning postsecondary students whose first credential completed by spring 2009 was a certificate by enrollment, demographic, and employment characteristics: 2009—Continued

		Credits required for certificate ¹			
Enrollment, demographic,	All	Less than	19–44	45 or more	Missing credit
and employment characteristics	certificates	19 credits	credits	credits	requirements
Sex ⁶					
Male	32.9	39.3	26.9	37.6	32.3
Female	67.1	60.7	73.1	62.4	67.7
Race/ethnicity ^{6,7}					
White	52.1	58.7	58.1	54.3	33.5
Black	18.3	17.7	20.4	17.0	16.5
Hispanic	23.4	17.6	16.5	20.9	43.1
Asian	2.3	‡	1.0!	4.9!	2.4!
Other	3.9	3.9!	4.0	3.0!	4.5!
Highest level of education attained by either parent ^{6,8}					
High school or less	56.5	57.5	56.0	53.9	58.9
Some postsecondary	24.1	21.7	25.7	25.8	21.8
Bachelor's degree or higher	19.4	20.8	18.4	20.3	19.3
Dependency status in 2003–04 ⁶					
Dependent	44.9	47.2	41.2	50.6	43.3
Independent	55.1	52.8	58.8	49.4	56.7
High school completion type ⁶					
Diploma	76.6	80.9	75.2	77.5	74.0
GED or equivalent	14.0	12.7	14.3	12.7	16.1
Other or none ⁹	9.4	6.4!	10.5!	9.8!	9.8!
Recent high school graduate at postsecondary entry ⁶					
Yes	33.9	36.4	30.6	35.4	35.4
No	66.1	63.6	69.4	64.6	64.6

Table 2.

CERTIFICATE COMPLETERS: Percentage distribution of credit requirements of 2003–04 beginning postsecondary students whose first credential completed by spring 2009 was a certificate by enrollment, demographic, and employment characteristics: 2009—Continued

Enrollment, demographic, and employment characteristics		Credits required for certificate ¹			
	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements
Employment status in 2003–04 ⁶					
Not employed	34.8	24.6	39.4	31.8	39.5
Employed part time	37.7	40.2	39.5	39.1	30.8
Employed full time	27.6	35.2	21.1	29.1	29.7

[!] Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.

[‡] Reporting standards not met (estimate based on fewer than 30 valid cases).

¹ The categories of completed certificates are as follows: 19 percent of students completed certificates requiring less than 19 credits, representing the lowest quarter of the distribution; 37 percent completed certificates requiring 19–44 credits, representing the middle two quarters of the distribution; 20 percent completed certificates requiring 45 or more credits, representing the highest quarter of the distribution; and 23 percent completed certificates for which the requirements could not be determined due to missing data (percentages do not add to 100 due to rounding). The cutoff points for the quarters yielded the closest possible approximations to quarters of the non-missing values in the sample.

² Other includes private nonprofit less-than-2-year, 2-year, and 4-year institutions, public less-than-2-year and 4-year institutions, and for-profit 4-year institutions. Institutions are included in the total, but not shown separately due to small sample sizes.

³ Includes undeclared or not in a degree program; agriculture, natural resources, and related fields; architecture and related services; area, ethnic, cultural, gender, group studies; visual and performing arts; biological and biomedical sciences; business, management, marketing, and related fields; communication, journalism, related fields; computer and information science and support; construction trades; education; engineering; English language and literature/letters; family, consumer sciences, and human sciences; foreign languages, literature, and linguistics; health professions and related programs; legal professions and studies; mathematics and statistics; mechanic and repair technologies/technicians; multidisciplinary and interdisciplinary studies; parks, recreation, leisure, and fitness studies; precision production; personal and culinary services; philosophy, theology, and religious studies; physical sciences; psychology; public administration and social service; science technologies and technicians; homeland security, law enforcement, firefighting, and related protective services; social sciences and history; transportation and materials moving; liberal arts and sciences, general studies, and humanities; and engineering technologies and related fields.

⁴ Did not have a break in enrollment greater than 4 months through completion of certificate program. Some students may have enrolled subsequently.

⁵ Based on coding of student transcripts from all institutions attended.

⁶ Excludes 16 percent of certificate completers who had transcript data but did not have student interview data.

⁷ Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Pacific Islander, Native Hawaiian, and students having origins in two or more races or a race not listed. Race categories exclude Hispanic origin.

⁸ Excludes the 1.2 percent of graduates who did not know either parent's highest level of education.

⁹ Includes those who had a high school completion certificate, attended a foreign high school, or had no high school diploma or completion certificate. NOTE: Results include students whose postsecondary transcripts indicated the first credential earned by spring 2009 was a certificate. Sixteen percent of certificate completers had transcript data but did not complete an interview. Credit requirements are measured in terms of semester credit hours or their equivalent. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, District of Columbia, and Puerto Rico. Detail may not sum to totals because of rounding.

Table S2.
Standard errors for table 2: CERTIFICATE COMPLETERS: Percentage distribution of credit requirements of 2003–04 beginning postsecondary students whose first credential completed by spring 2009 was a certificate by enrollment, demographic, and employment characteristics: 2009

		Credits required for certificate				
Enrollment, demographic,	All	Less than	19–44	45 or more	Missing credit	
and employment characteristics	certificates	19 credits	credits	credits	requirements	
Total	t	t	t	t	t	
Sector of institution awarding certificate						
Public 2-year	2.94	5.24	3.53	4.98	1.43	
For-profit 2-year	3.14	4.18	5.98	6.27	6.86	
For-profit less-than-2-year	2.34	2.46	4.49	4.65	6.02	
Other	1.62	1.88	3.31	3.06	4.14	
Field of study of first certificate completed						
Health professions and related sciences	2.53	6.20	4.86	5.40	4.17	
Personal and culinary services	2.31	2.26	3.05	5.23	4.64	
Mechanic/repair technologies/technicians	1.69	2.70	1.17	5.35	2.91	
Business/management/marketing/related	1.21	3.40	1.94	2.03	1.80	
Other	2.03	5.74	3.61	3.96	3.78	
Continuously enrolled						
Yes	2.05	6.06	2.97	4.15	3.45	
No	2.05	6.06	2.97	4.15	3.45	
Ever withdrew from a course						
Yes	1.89	4.80	3.35	3.56	3.10	
No	1.89	4.80	3.35	3.56	3.10	
Ever repeated a course						
Yes	1.21	3.14	2.34	2.68	1.69	
No	1.21	3.14	2.34	2.68	1.69	
Took any remedial course						
Yes	2.60	5.73	4.37	4.56	4.58	
No	2.60	5.73	4.37	4.56	4.58	

Table S2.
Standard errors for table 2: CERTIFICATE COMPLETERS: Percentage distribution of credit requirements of 2003–04 beginning postsecondary students whose first credential completed by spring 2009 was a certificate by enrollment, demographic, and employment characteristics: 2009—Continued

		Credits required for certificate			
Enrollment, demographic,	All	Less than	19–44	45 or more	Missing credit
and employment characteristics	certificates	19 credits	credits	credits	requirements
Sex					
Male	2.17	5.18	3.54	5.51	3.63
Female	2.17	5.18	3.54	5.51	3.63
Race/ethnicity					
White	2.74	5.84	4.01	5.05	4.57
Black	1.95	4.18	3.87	3.21	2.77
Hispanic	2.74	4.43	3.60	4.45	5.00
Asian	0.49	†	0.45	1.74	0.86
Other	0.72	1.89	1.12	1.31	1.61
Highest level of education attained by either parent					
High school or less	2.22	5.71	3.80	4.61	4.16
Some postsecondary	1.56	3.77	2.59	4.08	3.43
Bachelor's degree or higher	1.84	4.89	2.54	3.52	3.26
Dependency status in 2003–04					
Dependent	2.38	4.78	3.58	4.09	3.54
Independent	2.38	4.78	3.58	4.09	3.54
High school completion type					
Diploma	1.74	3.86	3.53	4.05	4.02
GED or equivalent	1.29	2.86	1.94	2.92	3.40
Other or none	1.81	2.81	3.66	3.01	3.71
Recent high school graduate at postsecondary entry					
Yes	2.09	4.05	3.27	4.29	4.34
No	2.09	4.05	3.27	4.29	4.34

Table S2.

Standard errors for table 2: CERTIFICATE COMPLETERS: Percentage distribution of credit requirements of 2003–04 beginning postsecondary students whose first credential completed by spring 2009 was a certificate by enrollment, demographic, and employment characteristics: 2009—Continued

Enrollment, demographic, and employment characteristics		Credits required for certificate			
	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements
Employment status in 2003–04					
Not employed	2.07	4.44	3.36	4.14	3.42
Employed part time	2.13	5.19	3.40	4.63	4.09
Employed full time	1.95	5.63	2.64	4.48	3.51

[†] Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Table 3.

AVERAGE TIME TO CERTIFICATE COMPLETION: Average number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009

Enrollment, demographic, and employment characteristics		Credits required for certificate ¹				
	All certificates ²	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Total	20.2	20.7	21.0	23.0	16.2	
Sector of institution awarding certificate						
Public 2-year	24.9	21.2	26.8	29.0	‡	
For-profit 2-year	16.5	‡	16.9	16.3	16.1	
For-profit less-than-2-year	13.7	‡	13.6	16.2	13.1	
Other ³	26.1	‡	21.9	29.0	29.6	
Field of study of first certificate completed						
Health and related clinical sciences	19.1	20.2	18.1	21.5	17.9	
Personal and culinary services	15.7	‡	19.3	‡	11.1	
Mechanic/repair technologies/technicians	19.6	‡	‡	21.9	‡	
Business/management/marketing/related	21.7	21.5	20.8	‡	‡	
Other ⁴	23.1	22.4	25.8	23.8	17.6	
Continuously enrolled ⁵						
Yes	16.0	15.2	16.6	19.1	13.1	
No	30.3	28.9	30.9	32.9	27.8	
Ever withdrew from a course ⁶						
Yes	29.9	28.3	30.8	34.6	26.8	
No	16.2	16.1	16.7	19.5	12.8	
Ever repeated a course ⁶						
Yes	30.4	28.9	25.9	38.3	‡	
No	18.9	19.5	20.4	20.7	15.3	
Took any remedial course ⁶						
Yes	24.6	22.3	25.0	30.1	21.2	
No	17.4	19.4	18.7	18.6	13.4	

Table 3.

AVERAGE TIME TO CERTIFICATE COMPLETION: Average number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

Enrollment, demographic, and employment characteristics		Credits required for certificate ¹				
	All	Less than	19–44	45 or more	Missing credit	
	certificates ²	19 credits	credits	credits	requirements	
Sex ⁷						
Male	23.0	23.7	25.3	22.8	19.6	
Female	21.1	20.8	21.7	25.4	16.5	
Race/ethnicity ^{7,8}						
White	25.1	24.6	25.5	27.3	21.1	
Black	17.8	14.6	17.9	20.8	17.6	
Hispanic	16.9	‡	19.5	16.5	14.1	
Asian	‡	‡	‡	‡	‡	
Other	20.4	#	‡	‡	‡	
Highest level of education attained by either parent ^{7,9}						
High school or less	18.9	18.7	19.3	23.5	14.4	
Some postsecondary	23.5	22.9	25.0	22.2	22.2	
Bachelor's degree or higher	28.9	30.1	29.4	30.8	25.0	
Dependency status in 2003–04 ⁷						
Dependent	24.4	25.0	25.9	27.7	17.7	
Independent	19.4	18.9	20.2	20.7	17.4	
High school completion type ⁷						
Diploma	22.3	22.4	23.7	24.0	18.5	
GED or equivalent	18.3	17.0	18.6	22.6	15.8	
Other or none ⁸	21.5	‡	‡	‡	‡	
Recent high school graduate at postsecondary entry ⁷						
Yes	26.3	28.5	29.5	27.7	18.4	
No	19.2	17.7	19.4	22.5	17.1	

Table 3.

AVERAGE TIME TO CERTIFICATE COMPLETION: Average number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

Enrollment, demographic, and employment characteristics		Credits required for certificate ¹				
	All certificates ²	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Employment status in 2003–04 ⁷						
Not employed	18.1	21.9	18.8	20.4	13.2	
Employed part time	24.1	21.9	24.8	29.0	19.3	
Employed full time	22.8	22.1	25.3	22.2	21.2	

[‡] Reporting standards not met (estimate based on fewer than 30 valid cases).

NOTE: Results include students whose postsecondary transcripts indicated the first credential earned by spring 2009 was a certificate. Sixteen percent of certificate completers had transcript data but did not complete an interview. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, District of Columbia, and Puerto Rico.

¹ The categories of completed certificates are as follows: 19 percent of students completed certificates requiring less than 19 credits, representing the lowest quarter of the distribution; 37 percent completed certificates requiring 19–44 credits, representing the middle two quarters of the distribution; 20 percent completed certificates requiring 45 or more credits, representing the highest quarter of the distribution; and 23 percent completed certificates for which the requirements could not be determined due to missing data (percentages do not add to 100 due to rounding). The cutoff points for the quarters yielded the closest possible approximations to quarters of the non-missing values in the sample.

² Includes 23 percent of certificate completers with missing credit requirements.

³ Other includes private nonprofit less-than-2-year, 2-year, and 4-year institutions, public less-than-2-year and 4-year institutions, and for-profit 4-year institutions. Institutions are included in the total, but not shown separately due to small sample sizes.

⁴ Includes agriculture, operations, and related sciences; communication, journalism, and related fields; communication technology and support; computer and information science and support; personal and culinary services; education; engineering; engineering technologies and technicians; family and consumer sciences and human sciences; legal professions and studies; English language and literature/letters; multidisciplinary and interdisciplinary studies; security and protective services; public administration and social service; construction trades; mechanic and repair technologies and technicians; precision production; transportation and materials moving; visual and performing arts; health and related clinical sciences; and business, management, marketing, and related fields.

⁵ Did not have a break in enrollment greater than 4 months through completion of certificate program. Some students may have enrolled subsequently.

⁶ Based on coding of student transcripts from all institutions attended.

⁷ Excludes 16 percent of certificate completers who had transcript data but did not have student interview data.

⁸ Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Pacific Islander, Native Hawaiian, and students having origins in two or more races or a race not listed. Race categories exclude Hispanic origin.

⁹ Excludes the 1.2 percent of graduates who did not know either parent's highest level of education.

¹⁰ Includes those who had a high school completion certificate, attended a foreign high school, or had no high school diploma or completion certificate.

Table S3.

Standard errors for table 3: AVERAGE TIME TO CERTIFICATE COMPLETION: Average number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009

		Credits required for certificate				
Enrollment, demographic, and employment characteristics	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Total	0.70	1.46	1.09	1.43	1.22	
Sector of institution awarding certificate						
Public 2-year	1.03	1.75	1.65	2.06	†	
For-profit 2-year	1.65	†	2.82	2.40	2.95	
For-profit less-than-2-year	0.83	†	0.86	2.91	0.92	
Other	2.76	†	4.22	7.20	5.60	
Field of study of first certificate completed						
Health and related clinical sciences	1.10	2.53	1.33	2.32	1.92	
Personal and culinary services	1.50	†	2.29	†	2.03	
Mechanic/repair technologies/technicians	1.65	†	†	3.47	†	
Business/management/marketing/related	2.64	4.57	4.49	†	†	
Other	1.44	3.10	2.17	2.98	3.67	
Continuously enrolled						
Yes	0.59	1.60	1.04	1.23	0.83	
No	1.26	2.34	2.18	3.00	3.47	
Ever withdrew from a course						
Yes	1.25	2.14	1.98	2.61	3.08	
No	0.77	1.76	1.23	1.43	0.78	
Ever repeated a course						
Yes	2.48	3.64	3.49	4.60	†	
No	0.71	1.58	1.17	1.38	1.11	
Took any remedial course						
Yes	1.20	1.91	1.80	2.59	2.35	
No	0.84	2.50	1.28	1.47	0.94	

Table S3.

Standard errors for table 3: AVERAGE TIME TO CERTIFICATE COMPLETION: Average number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

			Credits require	d for certificate	1
Enrollment, demographic, and employment characteristics	All	Less than	19–44	45 or more	Missing credit
	certificates	19 credits	credits	credits	requirements
Sex					
Male	1.29	2.42	2.18	2.36	3.04
Female	0.93	2.03	1.37	2.35	1.53
Race/ethnicity					
White	0.99	1.81	1.60	2.14	2.30
Black	1.20	2.35	2.60	3.15	3.09
Hispanic	1.52	†	3.10	2.55	2.02
Asian	†	†	†	†	t
Other	3.51	†	†	†	†
Highest level of education attained by either parent					
High school or less	1.00	2.31	1.59	2.23	1.37
Some postsecondary	1.35	3.05	2.11	2.98	3.08
Bachelor's degree or higher	1.64	3.43	2.11	4.40	4.35
Dependency status in 2003–04					
Dependent	1.09	1.91	2.02	2.20	1.97
Independent	1.21	2.35	1.65	2.43	2.04
High school completion type					
Diploma	0.81	1.61	1.34	1.75	1.79
GED or equivalent	1.61	4.05	3.31	3.74	2.02
Other or none	3.65	†	†	†	†
Recent high school graduate at postsecondary entry					
Yes	1.09	2.28	1.94	2.53	2.42
No	1.09	2.02	1.66	2.09	1.94

Table S3.

Standard errors for table 3: AVERAGE TIME TO CERTIFICATE COMPLETION: Average number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

Enrollment, demographic, and employment characteristics		Credits required for certificate				
	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Employment status in 2003–04						
Not employed	0.81	2.66	1.52	2.28	1.11	
Employed part time	1.17	2.41	2.06	2.70	2.64	
Employed full time	1.59	3.24	2.35	3.01	3.09	

[†] Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Table 4.

MEDIAN TIME TO CERTIFICATE COMPLETION: Median number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009

		Credits required for certificate ¹				
Enrollment, demographic, and employment characteristics	All certificates ²	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Total	13.0	16.0	15.0	16.0	11.0	
Sector of institution awarding certificate						
Public 2-year	21.0	16.0	22.0	28.0	‡	
For-profit 2-year	12.0	‡	11.0	12.0	12.0	
For-profit less-than-2-year	10.0	‡	10.0	11.0	10.0	
Other ³	17.0	‡	12.0 !	‡	21.0	
Field of study of first certificate						
Health and related clinical sciences	11.0	16.0	11.0	11.0	11.0	
Personal and culinary services	12.0	‡	16.0	‡	9.0	
Mechanic/repair technologies/technicians	15.0	‡	‡	15.0	‡	
Business/management/marketing/related	12.0	‡	‡	‡	‡	
Other ⁴	20.0	16.0	23.0	20.0	13.0	
Continuously enrolled ⁵						
Yes	11.0	10.0	11.0	14.0	10.0	
No	26.0	27.0	25.0	25.0	20.0!	
Ever withdrew from a course ⁶						
Yes	28.0	29.0	29.0	36.0	18.0	
No	11.0	11.0	12.0	13.0	10.0	
Ever repeated a course ⁶						
Yes	30.0	23.0	17.0	40.0	‡	
No	13.0	15.0	15.0	15.0	11.0	
Took any remedial course ⁶						
Yes	20.0	19.0	22.0	29.0	12.0	
No	11.0	11.0	11.0	12.0	11.0	

Table 4.

MEDIAN TIME TO CERTIFICATE COMPLETION: Median number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

		Credits required for certificate ¹				
Enrollment, demographic, and employment characteristics	All certificates ²	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Sex ⁷						
Male	17.0	18.0	23.0	17.0	13.0	
Female	14.0	16.0	15.0	18.0	10.0	
Race/ethnicity ^{7,8}						
White	20.0	22.0	20.0	22.0	14.0	
Black	11.0	8.0!	11.0 !	14.0	11.0	
Hispanic	11.0	‡	12.0	11.0	9.0	
Asian	‡	‡	‡	‡	‡	
Other	12.0	‡	‡	‡	‡	
Highest level of education attained by either parent ^{7,9}						
High school or less	12.0	14.0	13.0	17.0	10.0	
Some postsecondary	16.0	16.0	20.0	16.0	14.0!	
Bachelor's degree or higher	24.0	31.0	28.0	24.0!	14.0!	
Dependency status in 2003–04 ⁷						
Dependent	18.0	21.0	20.0	23.0	11.0	
Independent	13.0	15.0	14.0	13.0	11.0	
High school completion type						
Diploma	16.0	17.0	17.0	18.0	11.0	
GED or equivalent	11.0	8.0	11.0	16.0	11.0	
Other or none ¹⁰	17.0 !	‡	‡	‡	‡	
Recent high school graduate at						
postsecondary entry ⁷						
Yes	21.0	26.0	24.0	22.0	11.0	
No	12.0	14.0	13.0	16.0	11.0	

Table 4.

MEDIAN TIME TO CERTIFICATE COMPLETION: Median number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

Enrollment, demographic, and employment characteristics		d for certificate	certificate ¹		
	All certificates ²	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements
Employment status in 2003–04 ⁷					
Not employed	11.0	19.0	11.0	12.0	10.0
Employed part time	19.0	16.0	21.0	23.0	11.0
Employed full time	17.0	16.0	20.0	15.0	14.0

[!] Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.

NOTE: Results include students whose postsecondary transcripts indicated the first credential earned by spring 2009 was a certificate. Sixteen percent of certificate completers had transcript data but did not complete an interview. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, District of Columbia, and Puerto Rico.

[‡] Reporting standards not met (estimate based on fewer than 30 valid cases).

¹ The categories of completed certificates are as follows: 19 percent of students completed certificates requiring less than 19 credits, representing the lowest quarter of the distribution; 37 percent completed certificates requiring 19–44 credits, representing the middle two quarters of the distribution; 20 percent completed certificates requiring 45 or more credits, representing the highest quarter of the distribution; and 23 percent completed certificates for which the requirements could not be determined due to missing data (percentages do not add to 100 due to rounding). The cutoff points for the quarters yielded the closest possible approximations to quarters of the non-missing values in the sample.

² Includes 23 percent of certificate completers with missing credit requirements.

³ Other includes private nonprofit less-than-2-year, 2-year, and 4-year institutions, public less-than-2-year and 4-year institutions, and for-profit 4-year institutions. Institutions are included in the total, but not shown separately due to small sample sizes.

⁴ Includes agriculture, operations, and related sciences; communication, journalism, and related fields; communication technology and support; computer and information science and support; personal and culinary services; education; engineering; engineering technologies and technicians; family and consumer sciences and human sciences; legal professions and studies; English language and literature/letters; multidisciplinary and interdisciplinary studies; security and protective services; public administration and social service; construction trades; mechanic and repair technologies and technicians; precision production; transportation and materials moving; visual and performing arts; health and related clinical sciences; and business, management, marketing, and related fields.

⁵ Did not have a break in enrollment greater than 4 months through completion of certificate program. Some students may have enrolled subsequently.

⁶ Based on coding of student transcripts from all institutions attended.

⁷ Excludes 16 percent of certificate completers who had transcript data but did not have student interview data.

⁸ Black includes African American, Hispanic includes Latino, and Other includes American Indian, Alaska Native, Pacific Islander, Native Hawaiian, and students having origins in two or more races or a race not listed. Race categories exclude Hispanic origin.

⁹ Excludes the 1.2 percent of graduates who did not know either parent's highest level of education.

¹⁰ Includes those who had a high school completion certificate, attended a foreign high school, or had no high school diploma or completion certificate.

Table S4.

Standard errors for table 4: MEDIAN TIME TO CERTIFICATE COMPLETION: Median number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009

		Credits required for certificate				
Enrollment, demographic, and employment characteristics	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Total	0.92	2.31	1.47	1.82	0.67	
Sector of institution awarding certificate						
Public 2-year	1.03	2.63	1.96	3.52	†	
For-profit 2-year	1.01	†	2.21	3.22	1.56	
For-profit less-than-2-year	0.31	†	0.54	1.50	0.42	
Other	2.88	†	4.66	†	8.09	
Field of study of first certificate						
Health and related clinical sciences	0.41	3.84	0.85	1.87	0.57	
Personal and culinary services	2.29	†	0.73	†	0.69	
Mechanic/repair technologies/technicians	1.26	†	†	2.91	†	
Business/management/marketing/related	3.54	†	†	†	†	
Other	2.80	4.30	3.90	4.30	3.41	
Continuously enrolled						
Yes	0.64	2.12	0.86	1.72	0.96	
No	1.98	3.16	4.09	6.45	6.64	
Ever withdrew from a course						
Yes	2.50	4.36	3.45	4.26	3.32	
No	0.69	2.15	1.39	1.63	0.79	
Ever repeated a course						
Yes	7.41	4.05	4.70	8.44	†	
No	0.91	2.80	1.76	1.73	0.66	
Took any remedial course						
Yes	2.00	2.30	2.49	3.83	1.98	
No	0.63	2.95	0.72	1.82	0.64	

Table S4.

Standard errors for table 4: MEDIAN TIME TO CERTIFICATE COMPLETION: Median number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

		Credits required for certificate				
Enrollment, demographic, and employment characteristics	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Sex						
Male	2.30	4.83	4.24	3.34	2.05	
Female	1.44	2.71	1.53	4.24	0.51	
Race/ethnicity						
White	1.23	3.72	1.65	2.47	3.35	
Black	1.63	2.51	4.39	3.85	1.32	
Hispanic	0.91	†	3.14	1.10	0.75	
Asian	†	†	†	†	t	
Other	2.06	†	†	†	†	
Highest level of education attained by either parent						
High school or less	1.13	2.73	2.28	3.39	0.72	
Some postsecondary	1.98	4.70	3.38	3.66	5.53	
Bachelor's degree or higher	3.16	6.28	3.95	8.70	5.07	
Dependency status in 2003–04						
Dependent	1.62	2.44	2.49	2.63	0.91	
Independent	1.44	3.58	3.00	2.05	1.16	
High school completion type						
Diploma	1.21	2.88	1.52	3.20	1.08	
GED or equivalent	1.53	1.91	2.53	3.54	0.91	
Other or none	6.00	†	†	†	†	
Recent high school graduate at postsecondary entry						
Yes	1.71	3.86	3.17	3.17	1.27	
No	1.20	3.22	2.33	2.91	1.01	

Table S4.

Standard errors for table 4: MEDIAN TIME TO CERTIFICATE COMPLETION: Median number of months between postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements and enrollment, demographic, and employment characteristics: 2009—Continued

Enrollment, demographic, and employment characteristics		Credits required for certificate				
	All certificates	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Employment status in 2003–04						
Not employed	0.54	5.13	1.06	2.28	0.71	
Employed part time	2.13	4.36	3.75	4.37	1.33	
Employed full time	1.75	3.77	2.71	3.82	3.39	

[†] Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).

Table 5.

TIME TO CERTIFICATE COMPLETION: Percentage distribution of number of months between first postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements: 2009

	Time to complete							
Credit requirements ¹	9 months or less	10–12 months	13–24 months	More than 24 months				
Total	28.3	16.8	26.4	28.5				
Credit requirements								
Less than 19 credits	37.5	6.0!	23.5	33.1				
19–44 credits	26.6	16.6	26.2	30.7				
45 or more credits	19.3	20.1	28.1	32.6				
Missing credit requirements	32.9	24.2	28.6	14.2				

[!] Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.

NOTE: Results include students whose postsecondary transcripts indicated the first credential earned by spring 2009 was a certificate. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, District of Columbia, and Puerto Rico. Detail may not sum to totals because of rounding.

¹ The categories of completed certificates are as follows: 19 percent of students completed certificates requiring less than 19 credits, representing the lowest quarter of the distribution; 37 percent completed certificates requiring 19–44 credits, representing the middle two quarters of the distribution; 20 percent completed certificates requiring 45 or more credits, representing the highest quarter of the distribution; and 23 percent completed certificates for which the requirements could not be determined due to missing data (percentages do not add to 100 due to rounding). The cutoff points for the quarters yielded the closest possible approximations to quarters of the non-missing values in the sample.

Table S5.
Standard errors for table 5: TIME TO CERTIFICATE COMPLETION: Percentage distribution of number of months between first postsecondary enrollment and certificate completion among 2003–04 beginning postsecondary students who completed a certificate as their first credential by spring 2009, by credit requirements: 2009

	Time to complete							
Credit requirements	9 months or less	10–12 months	13–24 months	More than 24 months				
Total	2.08	1.73	2.12	2.49				
Credit requirements								
Less than 19 credits	4.67	2.32	5.97	4.87				
19–44 credits	3.96	2.67	2.55	4.41				
45 or more credits	3.24	4.73	4.76	4.46				
Missing credit requirements	4.35	3.35	4.06	3.30				

Table 6.
EMPLOYMENT OUTCOMES: Employment outcomes of 2003–04 postsecondary students who were employed in 2009, by certificate completion status and credits required for certificate completion: 2009

				Completers	5				
			(Credits required	d for certificate	1			
Employment outcomes	Non- completers To	Total	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements			
Annual salary									
Median	\$23,800	\$26,000	\$28,800	\$25,900	\$29,500	\$24,000			
Mean	\$26,700	\$31,000	\$34,000	\$30,200	\$32,700	\$27,300			
		Percent							
Labor force participation rate ²	90.6	94.5	96.0	94.2	93.6	94.2			
Unemployment rate ³	20.2	20.4	16.0	20.8	21.4	23.6			
Had unemployment spell(s)									
since last enrolled ⁴	36.7	31.7	29.1	35.9	26.2	33.8			
Satisfied with job's:									
Pay	55.1	59.8	71.7	58.3	58.2	49.7			
Fringe benefits	62.1	67.8	77.6	58.5	69.5	68.5			
Job security	81.4	78.2	83.0	77.1	81.4	71.1			
Opportunities for promotion	59.5	59.4	73.8	62.4	50.6	50.7			
All four of the aspects listed above	34.3	33.5	49.2	27.3	30.1	27.6			
Importance and challenge	80.4	78.0	80.3	82.1	77.5	70.1			
Opportunities to use education	71.8	72.5	72.0	77.6	70.9	67.5			
Opportunities for future training	63.1	69.7	70.9	75.1	68.8	61.6			
Job overall	80.9	79.0	82.9	81.5	75.3	74.5			

¹ The categories of completed certificates are as follows: 19 percent of students completed certificates requiring less than 19 credits, representing the lowest quarter of the distribution; 37 percent completed certificates requiring 19–44 credits, representing the middle two quarters of the distribution; 20 percent completed certificates requiring 45 or more credits, representing the highest quarter of the distribution; and 23 percent completed certificates for which the requirements could not be determined due to missing data (percentages do not add to 100 due to rounding). The cutoff points for the quarters yielded the closest possible approximations to quarters of the non-missing values in the sample.

² The labor force participation rate is the number of respondents in the labor force (the number employed plus the number not employed but looking for work) divided by the total number of respondents.

³ The unemployment rate is the number of respondents not employed but looking for work divided by the number of respondents in the labor force.

⁴ An unemployment spell is defined as a period of at least 3 months during which the respondent was unemployed and looking for a job.

NOTE: Certificate completers are students whose postsecondary transcripts indicated the first credential earned by spring 2009 was a certificate and who were not enrolled in 2009. Certificate noncompleters are students who enrolled in a certificate program in 2003–04 but whose postsecondary transcripts indicated they were not enrolled in 2009 and had not earned any degree or certificate as of spring 2009. All row variables are limited to students who completed an interview and were employed in 2009 and exclude the 16 percent of certificate completers who had transcript data but did not complete an interview. Credit requirements are measured in terms of semester credit hours or their equivalent. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico.

Table S6.
Standard errors for table 6: EMPLOYMENT OUTCOMES: Employment outcomes of 2003–04 postsecondary students who were employed in 2009, by certificate completion status and credits required for certificate completion: 2009

				Completers	3				
			Credits required for certificate						
Employment outcomes	Non- completers Tota	Total	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements			
Annual salary									
Median	\$1,370	\$1,370	\$2,850	\$1,460	\$1,870	\$1,350			
Mean	\$1,190	\$1,350	\$3,680	\$2,160	\$1,720	\$2,910			
		Percent							
Labor force participation rate	1.79	1.11	1.55	2.13	2.91	2.54			
Unemployment rate	3.40	2.21	4.60	3.83	4.54	5.26			
Had unemployment spell(s)									
since last enrolled	4.03	2.19	5.65	3.72	4.87	3.94			
Satisfied with job's:									
Pay	4.47	3.01	5.83	5.27	6.50	4.31			
Fringe benefits	3.93	3.06	5.57	5.14	6.41	4.41			
Job security	3.62	2.40	5.60	4.16	5.49	4.53			
Opportunities for promotion	3.85	0.94	6.30	4.85	7.08	4.60			
All four of the aspects listed above	3.41	3.05	8.62	3.99	5.37	3.42			
Importance and challenge	3.29	2.39	5.59	4.05	5.51	4.53			
Opportunities to use education	4.25	2.38	5.57	3.49	6.16	4.32			
Opportunities for future training	4.02	2.55	6.37	4.84	5.84	4.66			
Job overall	3.64	2.45	5.46	4.80	6.28	4.41			

Table 7.

EMPLOYMENT CHARACTERISTICS: Among 2003–04 beginning postsecondary students who were employed in spring 2009, percentage distribution of employment characteristics, by completion status and credit requirements: 2009

				Completers	i	
		<u> </u>	Cr	edits required	for certificate ¹	
Employment characteristics	Non- completers	Total	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements
Total	100.0	100.0	100.0	100.0	100.0	100.0
Hours worked per week						
Part-time (less than 35 hours)	35.0	16.7	11.5 !	26.4	7.7!	16.8
Full-time (35 hours or more)	65.0	83.3	88.5	73.6	92.3	83.2
Annual salary tercile at current job, among all 2003–04 beginning postsecondary students ²						
Bottom third (\$23,000 or less)	47.5	38.1	35.9	41.0	27.4	46.9
Middle third (\$23,001 to \$35,160)	31.3	36.1	30.1	36.9	42.0	35.6
Top third (\$35,161 or more)	21.3	25.8	34.0	22.0	30.6	17.6
Employer type						
For-profit company	56.8	57.4	62.0	54.7	54.6	59.1
Nonprofit organization	15.0	10.9	9.5!	11.8	13.6!	8.3
Local, state, or federal government	9.9 !	13.7	16.5!	15.5	13.3	8.3
Other ³	18.3	18.0	12.0!	17.9	18.5	24.2
Occupation ⁴						
Business and administrative	22.7	25.9	29.1	24.9	21.4	28.4
Health care	13.1	24.3	15.8!	31.5	27.9	19.6
Personal service and sales	31.9	21.0	17.1	23.1	18.2	25.0
Production	18.8	18.0	22.2!	9.1	29.3	15.2
Other	13.4	10.8	15.8!	11.4!	3.2!	11.9
Employer required an industry certification or occupational license						
Yes	25.9	31.0	20.2	33.6	37.0	33.2
No	74.1	69.0	79.8	66.4	63.0	66.8
Employer offered medical, retirement, and life insurance benefits						
Yes	57.8	57.4	75.7	51.9	51.3	50.3
No	42.2	42.6	24.3	48.1	48.7	49.7
Job as start of career						
Did not consider job as start of career Considered job as start of career or	37.0	28.6	26.7	24.2	30.9	35.2
part of an established career	63.0	71.4	73.3	75.8	69.1	64.8

Table 7.

EMPLOYMENT CHARACTERISTICS: Among 2003–04 beginning postsecondary students who were employed in spring 2009, percentage distribution of employment characteristics, by completion status and credit requirements: 2009—Continued

			Completers				
	Non- completers		Credits required for certificate ¹				
Employment characteristics		Total	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Undergraduate education helped advance career							
Yes	52.2	58.8	57.8	39.9	65.7	50.8	
No	47.8	41.2	42.2	60.1	34.3	49.2	

[!] Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.

¹ The categories of completed certificates are as follows: 19 percent of students completed certificates requiring less than 19 credits, representing the lowest quarter of the distribution; 37 percent completed certificates requiring 19–44 credits, representing the middle two quarters of the distribution; 20 percent completed certificates requiring 45 or more credits, representing the highest quarter of the distribution; and 23 percent completed certificates for which the requirements could not be determined due to missing data (percentages do not add to 100 due to rounding). The cutoff points for the quarters yielded the closest possible approximations to quarters of the non-missing values in the sample.

² Salary terciles were established by calculating the 33rd and 66th percentile cut-points of annual income for all 2003–04 beginning postsecondary students who were employed in spring 2009 and not enrolled in a degree or certificate program.

³ Other includes self-employed respondents as well as those working for undergraduate schools, the military, and other employers.

⁴ Business and administrative includes business or financial operations; office or administrative support; management; and legal occupations. Health care includes health care support and health care practitioners/technical occupations. Personal service and sales includes protective service; food preparation or serving related; building, grounds cleaning, or maintenance; personal care and service; military specific; and sales and related occupations. Production includes production; construction and extraction; installation, maintenance, and repair; transportation or material moving; and farming, fishing, and forestry occupations. Other includes computer and mathematical; architecture and engineering; life, physical, or social science related; community or social services; education, training, or library; and arts, design, entertainment, sports, or media occupations. NOTE: Certificate completers are students whose postsecondary transcripts indicated the first credential earned by spring 2009 was a certificate and who were not enrolled in 2009. Certificate noncompleters are students who enrolled in a certificate program in 2003–04 but whose postsecondary transcripts indicated they were not enrolled in 2009 and had not earned any degree or certificate as of spring 2009. All row variables are limited to students who completed an interview and were employed in 2009 and exclude the 16 percent of certificate completers who had transcript data but did not complete an interview. Credit requirements are measured in terms of semester credit hours or their equivalent. Estimates include students enrolled in Title IV eligible postsecondary institutions in the 50 states, the District of Columbia, and Puerto Rico. Detail may not sum to totals because of rounding.

Table S7.
Standard errors for table 7: EMPLOYMENT CHARACTERISTICS: Among 2003–04 beginning postsecondary students who were employed in spring 2009, percentage distribution of employment characteristics, by completion status and credit requirements: 2009

				Completers	6	
			С	redits required	d for certificate)
Employment characteristics	Non- completers	Total	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements
Total	t	t	t	t	t	t
Hours worked per week						
Part-time (less than 35 hours)	4.28	2.03	4.39	4.15	2.94	3.26
Full-time (35 hours or more)	4.28	2.03	4.39	4.15	2.94	3.26
Annual salary tercile at current job, among all 2003–04 beginning postsecondary students						
Bottom third (\$23,000 or less)	3.63	2.94	7.37	4.49	5.39	5.23
Middle third (\$23,001 to \$35,160)	3.49	2.70	6.08	4.20	5.96	4.28
Top third (\$35,161 or more)	3.36	2.67	8.07	3.28	5.51	4.89
Employer type						
For-profit company	4.37	2.86	6.99	4.61	5.57	5.18
Nonprofit organization	2.88	1.79	3.69	2.92	5.64	2.42
Local, state, or federal government	3.02	1.97	5.78	3.87	3.88	3.09
Other	3.10	1.91	4.40	2.63	4.57	3.55
Occupation						
Business and administrative	2.97	2.27	6.21	3.68	5.05	3.87
Health care	2.84	2.38	4.90	4.06	6.15	4.28
Personal service and sales	4.10	2.48	4.74	4.23	4.42	4.55
Production	3.59	2.73	8.23	2.22	6.43	4.12
Other	3.22	1.71	4.91	3.44	1.32	3.35
Employer required an industry certification or occupational license						
Yes	3.20	2.15	4.57	4.23	6.15	3.99
No	3.20	2.15	4.57	4.23	6.15	3.99
Employer offered medical, retirement, and life insurance benefits						
Yes	4.39	3.21	5.66	4.46	7.33	5.12
No	4.39	3.21	5.66	4.46	7.33	5.12
Job as start of career						
Did not consider job as start of career Considered job as start of career or	4.50	2.48	6.10	3.88	5.27	4.60
part of an established career	4.50	2.48	6.10	3.88	5.27	4.60

Table S7.
Standard errors for table 7: EMPLOYMENT CHARACTERISTICS: Among 2003–04 beginning postsecondary students who were employed in spring 2009, percentage distribution of employment characteristics, by completion status and credit requirements: 2009—Continued

Employment characteristics			Completers				
			Credits required for certificate				
	Non- completers	Total	Less than 19 credits	19–44 credits	45 or more credits	Missing credit requirements	
Undergraduate education helped advance career							
Yes	4.62	2.81	7.43	4.35	4.90	4.62	
No	4.62	2.81	7.43	4.35	4.90	4.62	

[†] Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2003–04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:04/09).